

Amendment to the Claims

1. (Original) A device for forming an array of magnetic particles, the device comprising:
a substrate comprising a plurality of magnetic regions, wherein the magnetic regions produce a plurality of localized magnetic fields when magnetized, and wherein the localized magnetic fields are sufficient to trap a magnetic particle with a trapping energy at least five times greater than the thermal energy of the particle at room temperature.
2. (Currently amended) The device of claim 1 0, wherein the localized magnetic fields are sufficient to trap a magnetic particle with a trapping energy at least an order of magnitude greater than the thermal energy of the particle at room temperature.
3. (Currently amended) The device of claim 1 0, wherein the localized magnetic fields are sufficient to trap a magnetic particle with a trapping energy at least three times greater than the thermal energy of the particle at room temperature.
4. (Currently amended) The device of any of claims 1 0, 2, or 3, wherein the thermal energy of the particle is approximately 0.025 eV.
5. (Currently amended) The device of any of claims 1 0, 2, or 3, wherein the localized magnetic fields exist substantially in a volume between adjacent magnetic regions.
6. (Currently amended) The device of any of claims 1 0, 2, or 3, wherein each of the localized magnetic fields corresponds to a different single magnetic region and exists substantially in a volume between opposite poles of that magnetic region.
7. (Currently amended) The device of any of claims 1 0, to 4, wherein the magnetic regions project above the surface of the substrate.

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